

CLAIMS

1. A method for providing a service in connection with a call terminating at a subscriber when the subscriber is not registered in a network, the method comprising at least the steps of:

maintaining in the network at least one first function which triggers at least one first service associated with the terminating call for the subscriber when the subscriber is not registered in the network; and

routing the call terminating at the subscriber to the first function when the subscriber is not registered in the network.

2. The method of claim 1, further comprising during the unregistration of the subscriber the step of copying at least first service information of subscriber data of the subscriber from a network node maintaining the subscriber data of the subscriber to a database used by the first function.

3. The method of claim 1 further comprising the steps of:
receiving the call terminating at the subscriber in the first function;
transmitting subscriber's service information from a network node maintaining the subscriber data of the subscriber to the first function; and
starting the triggering of services in the first function.

4. The method of claim 1, further comprising the steps of:
receiving the call terminating at the subscriber in the first function;
checking whether a database used by the first function contains subscriber's service information;

if the database contains subscriber's service information, starting the triggering of services;

if the database does not contain subscriber's service information, the method further comprises the following steps of:

- requesting at least first service information associated with the call terminating at the subscriber from a network node maintaining subscriber data of the subscriber; and

- in response to the reception of the requested service information, storing the received subscriber's service information in the database and starting the triggering of the service.

5. The method of claim 1, wherein the first function triggers the service when triggering conditions are fulfilled.

6. The method of claim 5, wherein the service is triggered in an execution environment which is an internal environment of the first function.

7. The method of claim 5, wherein the service is triggered in an execution environment which is an external environment of the first function.

8. The method of claim 1, further comprising the steps of:
maintaining in the first function an execution environment corresponding to user equipment in order to perform at least one service content;
and

loading at least one service content or the address of the service content associated with the call terminating at the subscriber from the user equipment to the first function.

9. The method of claim 8, wherein the loading is performed during the unregistration of the subscriber.

10. The method of claim 1, wherein the first function is a call state control function.

11. The method of claim 1, wherein the first function is a session initiation protocol call processing server.

12. A method for providing a service in connection with a call terminating at a subscriber when the subscriber is not registered in a network, the method comprising at least the steps of:

maintaining in the network at least one first function which triggers, when triggering conditions are fulfilled, at least one first service associated with the terminating call for the subscriber when the subscriber is not registered in the network;

copying at least first service information of subscriber data of the subscriber from a home subscriber server maintaining the subscriber data to a

database used by the first function during the unregistration of the subscriber;
and

routing the call terminating at the subscriber to the first function
when the subscriber is not registered in the network.

13. A method for providing a service in connection with a call terminating at a subscriber when the subscriber is not registered in a network, the method comprising at least the steps of:

maintaining in the network at least one first function which triggers, when triggering conditions are fulfilled, at least one first service associated with the terminating call for the subscriber when the subscriber is not registered in the network;

routing the call terminating at the subscriber to the first function when the subscriber is not registered in the network;

receiving the call terminating at the subscriber in the first function;

transmitting subscriber's service information from a home subscriber server maintaining subscriber data of the subscriber to the first function; and

starting the triggering of services in the first function.

14. A method for providing a service in connection with a call terminating at a subscriber when the subscriber is not registered in a network, the method comprising at least the steps of:

maintaining in the network at least one first function which triggers when triggering conditions are fulfilled at least one first service associated with the terminating call for the subscriber when the subscriber is not registered in the network;

routing the call terminating at the subscriber to the first function when the subscriber is not registered in the network;

receiving the call terminating at the subscriber in the first function;

checking whether a database used by the first function contains subscriber's service information;

if the database contains subscriber's service information, starting the triggering of services;

if the database does not contain subscriber's service information, the method further comprises at least the steps of:

- requesting at least first service information associated with the call terminating at the subscriber from a home subscriber server maintaining subscriber data of the subscriber; and
- in response to the reception of the requested service information, storing the received subscriber's service information in the database and starting the triggering of the service.

15. A communication system comprising
at least one first function for triggering a service associated with the call terminating at a subscriber of the communication system when the subscriber is not registered in the communication system, and
at least one first network node for giving a routing address of a subscriber for a call terminating at the subscriber, the first network being configured to give the address of the first function as the routing address when the subscriber is not registered in the communication system.

16. The communication system of claim 15, wherein the first network node transmits at least subscriber data associated with the terminating call to the first network node in response to a subscriber data request of the first network node.

17. The communication system of claim 16, wherein the first function requests subscriber data from the first network node in response to the subscriber's registration in the first function.

18. The communication system of claim 16, wherein the first function requests subscriber data from the first network node in response to the reception of the call terminating at the subscriber.

19. The communication system of claim 15, wherein
the first network node transmits at least the subscriber data associated with the terminating call to the first function in response to the changes in the subscriber data, and
the first function stores at least the subscriber data associated with the terminating call and update them in response to the subscriber data received from the first network node.

20. The communication system of claim 15, further comprising at least one unit of user equipment for transmitting at least one service content associated with the call terminating at the subscriber to the first function for receiving and storing the service content and wherein the first function comprises an execution environment for performing the received and stored service content.

21. The communication system of claim 15, further comprising at least one unit of user equipment for transmitting at least one pointer to the service content associated with the call terminating at the subscriber to the first function for receiving and storing the pointer, at least one execution environment for performing the service content, and memory means for maintaining the service content in the system.

22. A network node in a communication system where a service associated with a call terminating at a subscriber is triggered in that network node of the communication system to which calls terminating at the subscriber are routed, the network node comprising at least one interface for the subscriber, by which interface at least one service associated with the call terminating at the subscriber is triggered when the subscriber is not registered in the network.

23. The network node of claim 22, wherein the network node is configured to receive subscriber data of the subscriber when the subscriber performs the unregistration in the network.

24. The network of claim 23, the network node further comprising an execution environment corresponding to the execution environment of user equipment in the communication system, and at least some of the subscriber data relate to at least one service content in the user equipment.

25. The network node of claim 22, wherein the network node is configured to request subscriber data of the subscriber in response to the routing of the call terminating at the subscriber to the network node.

26. The network node of claim 22, wherein the network node is configured to store at least subscriber data relating to the terminating call in a first database used by the network node.

27. The network node of claim 26, wherein the network node is configured to check whether subscriber data of the subscriber are stored in the first database and to request only those subscriber data that the network node needs for triggering a service associated with the terminating call and that are not stored in the database.

28. A network node which is configured to give routing information of a subscriber and to recognize whether the subscriber has performed the unregistration in the network, the network node further being configured to give the address of the first function, which triggers services of subscribers that are not registered in the network if the triggering conditions are fulfilled, as a routing address for the subscriber when the subscriber is not registered in the network.

29. The network node of claim 28, wherein the network node is configured to maintain the address of the first function for each subscriber separately.

30. The network node of claim 28, wherein the network node is configured to set the address of the first function as a routing address of the subscriber in response to the subscriber performing the unregistration in the network.

31. The network node of claim 28, wherein the network node is configured to give the address of the first function as a routing address in response to the absence of the routing address of the subscriber.

32. User equipment in a communication system, the user equipment comprising at least one service content for providing a service associated with a call terminating at a subscriber, and being configured to transmit information associated with the service content to the communication system

in order to provide the service when the user equipment is not registered in the communication system.

33. The user equipment of claim 32, wherein said information comprises the service content.

34. The user equipment of claim 32, wherein said information comprises a pointer which points to the service content.

35. The user equipment of claim 34, wherein said information further comprises at least one value of a parameter associated with the service content.

36. The user equipment of claim 32, wherein the user equipment is configured to transmit said information when it registers in the communication system.

37. The user equipment of claim 32, wherein the user equipment is configured to transmit said information in response to the changes in the service content.

38. The user equipment of claim 32, wherein the user equipment is configured to transmit said information when it performs the unregistration in the communication system.

39. The user equipment of claim 32, wherein the user equipment is configured to transmit said information in response to a request received from the system.

204010-665E001